

ABSTRACT

- A reaction of a para-substituted aryl composition with cyclohexanone is facilitated by a metal hydride, such as NaH, KH, LiH, MgH<sub>2</sub>, CaH<sub>2</sub>, AlH<sub>3</sub>, and/or LiAlH<sub>4</sub> to make first intermediates useful in producing a drug commonly known as Venlafaxine.
- 5 Alternatively, lithium diisopropylamide (diisopropylamino lithium) may be used in place of the metal hydride. The first intermediates may be further reacted to form second intermediates in a reduction that is facilitated by Rainey nickel or a metal hydride. These reaction processes may each occur in an organic solvent, which delivers highly pure reaction products in high yield.